



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,863	05/05/2005	Christoph Geiberger	C70518	9661

20462 7590 01/08/2008
SMITHKLINE BEECHAM CORPORATION
CORPORATE INTELLECTUAL PROPERTY-US, UW2220
P. O. BOX 1539
KING OF PRUSSIA, PA 19406-0939

EXAMINER

GUIDOTTI, LAURA COLE

ART UNIT	PAPER NUMBER
----------	--------------

3723

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

01/08/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

US_cipkop@gsk.com

Office Action Summary	Application No. 10/533,863	Applicant(s) GEIBERGER, CHRISTOPH	
	Examiner Laura C. Guidotti	Art Unit 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-13 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-13 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the part" in Line 14. There is insufficient antecedent basis for this limitation in the claim. It is unclear as to whether "the part" is the part being referred to in Line 9. If it is the same part, it is confusing as to how the intermediate bristle-carrying pad is a maximum width of the longitudinally adjacent part? In general, Lines 13-15 are somewhat confusing.

Claim 1 recites the limitation "the tip pad" in Line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-12, 16-20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naslund, US D440,404 in view of Weihrauch, US 6,353,958 and in view of Applicant's present Specification.

Naslund discloses the claimed invention including a toothbrush head having a head and a toothbrush grip handle (see Figures), the head having a base end at which the head is connected to the toothbrush grip handle defining a longitudinal direction (longitudinal direction is in the vertical direction as oriented in Figures 1-3), and comprising three widthways adjacent, longitudinally extending sections from which bristles extend (the three sections shown best in Figure 3), there is a middle section (the central middle section, Figure 3) and a lateral section on each widthways side of the middle section (Figure 3), one or more sections being resiliently flexibly connected or connectable to the grip handle (capable of being "connectable", Figure 3), characterized in that the end of the middle section adjacent to the tip end of the head is integrally widthways enlarged relative to a longitudinally adjacent part of the middle section longitudinally adjacent nearer to the handle (best shown in Figure 3) to provide a bristle-carrying pad adjacent to the tip end of the head having a bristle carrying surface (Figure 3) which extends across the entire width of the toothbrush head adjacent the tip end (Figure 3), the middle section comprises an intermediate bristle carrying pad

(Figure 3, the intermediate pad is the pad adjacent the handle and neck), being a region of maximum width of the part of the middle section between the tip pad and the base end of the head (see Figure 3), with a first link region of the section between the tip pad and the intermediate pad being narrower in width than the adjacent part of the tip pad and the intermediate pad (Figure 3), and a second link region of the section between the intermediate pad and the handle being narrower in width than the adjacent part of the intermediate pad (Figure 3), there being only one intermediate pad (pad adjacent the handle, Figure 3), only one first link region and only one second link region (Figure 3), and one or more sections are connected to the grip handle by an integral neck (Figure 3). Regarding claim 2, there are only three sections, being a middle section and two lateral sections (Figure 3). Regarding claim 5, in its longitudinal direction, the tip pad has a length of 10-50% of the toothbrush head between its base and tip ends (see Figure 3). Regarding claim 6, the bristle carrying surface of the tip pad forms an angle of 160-180 degrees with the surface of the adjacent part of the first link region (see Figure 3). Regarding claim 7, the tip pad extends longitudinally beyond the ends of the ends of the lateral sections remotest from the handle for a distance of 15-30% of the length of the toothbrush head between its base end and tip end (see Figure 3). Regarding claim 8, the intermediate pad has a length 20-40% of the length of the toothbrush head between the tip end and the base end of the head (see Figure 3, closer to 20%). Regarding claim 9, the intermediate pad is located so that 50% or more of its bristle face is in the longitudinal half of the head furthest from the tip end of the head (see Figure 3). Regarding claim 10, the intermediate pad is located so that all of its

bristle face is in the longitudinal half of the head furthest from the tip end of the head (see Figure 3). Regarding claim 11, the middle section comprises longitudinally sequentially a widthways narrow region extending from the base end of the head toward the tip end of the head from the direction of the handle to comprise the second link region and enlarging widthways at a place intermediate between the base of the head and the tip pad to form the intermediate pad, a widthways narrow region extending from the intermediate pad toward the tip end of the head from the direction of the handle to comprise the first link region, and integrally enlarging widthways adjacent to the tip end of the head to form such a tip pad (see Figure 3, wherein the intermediate pad is considered to be the pad next to the tip pad). Regarding claim 12, the second link region is between the intermediate pad and the base end of the head (Figure 3). Regarding claim 16, all of the sections are respectively connected to the grip handle by means of the neck that extends between the base end of the sections and an end of the grip handle closest to the sections (Figure 3). Regarding claim 17, each section of the head is connected to the grip handle by a respective neck being an integral extension of the section toward the handle, and the neck has a length in the range 0.4-1.5 of the length of the head section (as shown in Figure 3). Regarding claim 18, the middle and lateral sections have widthways adjacent sides which taper in their widthways spacing so as to be spaced apart with an air gap between them at their ends closest to the handle however they are capable of contacting their ends closest to the tip (Figure 3). Naslund does not disclose that one or more (or two or more) sections are resiliently

flexible connected to the grip handle of the toothbrush by an integral resilient flexible neck or that a head is made of a fiber-reinforced plastic material.

Weihrauch teaches a toothbrush that has head section resiliently flexibly connected to the grip handle of the toothbrush by a integral resiliently flexible neck (3) having a spring part (4) so that a user brushing is able to resiliently bend the toothbrush at its neck portion. Weihrauch further teaches that such a spring part that is resiliently flexible comprises of a fiber-reinforced plastics material (Column 2 Lines 52-56). There is elastomeric material between widthways parts of necks (as particularly shown in Figures 5-6).

Applicant's present Specification on Page 8 Lines 16-21 states that the head can be "made of...polypropylene, polystyrene, etc., as well known in toothbrush manufacture" and further states that "The plastics material may be selected to optimize resilience of the section and/or neck...e.g. polyester fibre-reinforced polypropylene..."

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the toothbrush at the head and neck portion of Naslund so as to be resiliently flexible and comprise a fibre-reinforced plastics material, as Weihrauch teaches, in order to provide a spring part that allows resilient and elastic bending of the head relative to the handle when pressure is applied during brushing and also it would have been obvious for one of ordinary skill in the art to modify the fibre-reinforced plastics material of Naslund and Weihrauch so that it is a polyester fibre-reinforced polypropylene, as the Applicant admits, that polypropylene is well known in toothbrush manufacture and that to optimize the resilience one can employ specifically polyester

fiber-reinforced polypropylene, and also it would have been obvious to one having ordinary skill in the art at the time of the invention was made to manufacture the head of Naslund and Weihrauch from a polyester fibre-reinforced polypropylene, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. In re Leshin, 125 USPQ 416.

4. Claims 1-3, 5-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dawson et al., US 5,802,656 in view of Peters, US 4,520,526.

Dawson et al. disclose the claimed invention including a toothbrush having a head (1) having a base end at which the head is connected to a handle (2; see Figures) defining a longitudinal direction (longitudinal direction is in the vertical direction as oriented in Figures 1-2), the head having a longitudinally opposite tip end (see Figures), and comprising three widthways adjacent, longitudinally extending sections from which bristles extend (the three sections are 6, 6, and 23 which are best shown in Figures 6, 16, 19, or 22; the bristles are 8, 9, 10, 11, 12; see Figures), there is a middle section (23) and a lateral section on each widthways side of the middle section (each are 6), one or more sections being resiliently flexibly connected or connectable to the grip handle (Column 4 Lines 15-18), characterized in that the end of the middle section adjacent to the tip end of the head (the end is 21 or 24) is integrally widthways enlarged relative to a longitudinally adjacent part of the middle section longitudinally adjacent nearer to the handle (best shown in Figures 16-18) to provide a bristle-carrying pad adjacent to the tip end of the head having a bristle carrying surface (again, see Figures)

and which extends across the entire width of the toothbrush head adjacent the tip end (see Figures 16-18), the middle section comprises an intermediate bristle carrying pad (unlabeled, shown in Figure 16 in particular), being a region of maximum width of the part of the middle section between the tip pad and the base end of the head (see Figures), with a first link region of the section between the tip pad and the intermediate pad being narrower in width than the adjacent part of the tip pad and the intermediate pad (unlabeled, shown in Figure 16 in particular), and a second link region of the section between the intermediate pad and the handle being narrower in width than the adjacent part of the intermediate pad (unlabeled, shown in Figure 16 in particular), there is only one intermediate pad, only one first link region, and only one second link region (unlabeled, shown in Figure 16 in particular). Regarding claim 2, there are only three sections, being a middle section and two lateral sections (6, 6, and 23). Regarding claim 3, one or more of the sections are resiliently flexibly connected to the grip handle so that the sections may be resiliently bent out of a plane parallel to the longitudinal and width directions under pressure (as both members 6 are resilient; Column 4 Lines 15-18). Regarding claim 5, in its longitudinal direction, the tip pad has a length of 10-50% of the toothbrush head between its base and tip ends (as shown in Figure 16 for example). Regarding claim 6, the bristle carrying surface of the tip pad forms an angle of 160-180 degrees with the surface of the adjacent part of the first link region (shown in Figure 16). Regarding claim 7, the tip pad extends longitudinally beyond the ends of the ends of the lateral sections remotest from the handle for a distance of 15-30% of the length of the toothbrush head between its base end and tip end (as shown in Figure 16).

Regarding claim 8, the intermediate pad has a length 20-40% of the length of the toothbrush head between the tip end and the base end of the head (as shown in Figure 16). Regarding claim 9, the intermediate pad is located so that 50% or more of its bristle face is in the longitudinal half of the head furthest from the tip end of the head (as it's about 50%-70%, see Figures). Regarding claim 10, the intermediate pad is located so that all of its bristle face is in the longitudinal half of the head furthest from the tip end of the head (as shown in Figure 16). Regarding claim 11, the middle section comprises longitudinally sequentially a widthways narrow region extending from the base end of the head toward the tip end of the head from the direction of the handle to comprise the second link region and enlarging widthways at a place intermediate between the base of the head and the tip pad to form the intermediate pad, a widthways narrow region extending from the intermediate pad toward the tip end of the head from the direction of the handle to comprise the first link region, and integrally enlarging widthways adjacent to the tip end of the head to form such a tip pad (as shown in Figure 16). Regarding claim 12, the second link region is between the intermediate pad and the base end of the head (Figure 16). Regarding claim 13, widthways adjacent sections are in contact allowing sliding relative movement of the sections (all "adjacent sections" are in contact, see Figures). Dawson et al. does not disclose that one or more (or two or more) sections are connected to the grip handle of the toothbrush by an integral resilient flexible neck, although Dawson et al. does include a neck (portion of 2 adjacent the base end of the head, see Figures).

Peters teaches a toothbrush having a head (26) and a toothbrush grip handle (24) an integral resiliently flexible neck (at 30, 32; Column 2 Lines 32-35) so that the head flexes relative to the handle when a user applies excessive force while brushing (Column 1 Lines 41-58, Column 2 Lines 36-41).

It would have been obvious for one of ordinary skill in the art at the time of the invention to substitute the neck of Dawson et al. for one that is integral and resiliently flexible, as Peters teaches, so that a user brushing teeth will be equipped with a toothbrush responsive to too much pressure so that they will be better prevented from damaging teeth and gums by applying too much pressure.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dawson et al., US 5,802,656 and Peters, US 4,520,526 as applied to claim 20 in view of Moskovich et al., US 2001/0042280.

Dawson et al. and Peters disclose all elements above, however do not disclose that the tip and intermediate pad are longitudinally separated by a distance 1-2 cm between centers of the tip and intermediate pads.

Moskovich et al. teach three bristle "pads" (16, 18, and 20) wherein bristle pad "16" is considered to be a tip end bristle pad and either bristle pads "18" or "20" are considered to be intermediate pads. The centers of the bristle pads are spaced or separated by a distance in the range of 1-2 cm (paragraph 18 explains different separation dimensions, and while not explicitly stated, the separation is in the range of 1-2cm) so that the free ends of the bristle pads have a profile that conforms to the curvature between teeth (paragraph 18).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the tip and intermediate pads of Dawson et al. and Peters so that they are longitudinally separated by a distance of 1-2 cm, as Moskovich et al. teach, so that the bristle pads conform to the spacings found between the users teeth.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naslund, US D440,404 and Weihrauch, US 6,353,958 as applied to claim 20, in view of Moskovich et al., US 2001/0042280.

Naslund and Weihrauch disclose all elements above, however do not disclose that the tip and intermediate pad are longitudinally separated by a distance 1-2 cm between centers of the tip and intermediate pads.

Moskovich et al. teach three bristle “pads” (16, 18, and 20) wherein bristle pad “16” is considered to be a tip end bristle pad and either bristle pads “18” or “20” are considered to be intermediate pads. The centers of the bristle pads are spaced or separated by a distance in the range of 1-2 cm (paragraph 18 explains different separation dimensions, and while not explicitly stated, the separation is in the range of 1-2cm) so that the free ends of the bristle pads have a profile that conforms to the curvature between teeth (paragraph 18).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the tip and intermediate pads of Naslund and Weihrauch so that they are longitudinally separated by a distance of 1-2 cm, as Moskovich et al. teach, so that the bristle pads conform to the spacings found between the users teeth.

Response to Arguments

7. Applicant's arguments with respect to claims 1-3, 5-13, and 16-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura C Guidotti/
Primary Examiner, Art Unit 3723

lcg